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ABSTRACT

Rio Salado Community College's (RSCC's) Adult Basic Education (ABE) program piloted a project utilizing two minicourses on videodisc, which incorporated sound instructional design and video technology. The videodisc courses, "Core Concepts in Mathematics" and "Understanding Chemistry and Energy," were designed to accommodate students who needed extensive review as well as repetition of one particular segment. Responses to the programs varied. Three segments of "Core Concepts in Mathematics" were felt to have problems in presentation or in content, while "Understanding Chemistry" was well received by both students and instructors. The positive features of the programs included good graphics, ease of use, variety, non-threatening format, and coordinated use of different visuals, while the lack of instructions about moving from screen to book and inadequacy of screen menu were seen as problems. Once teachers became familiar with the technology, they were able to assist students in paying attention to detail and following directions. Overall, videodisc hardware was felt to be a viable option to ABE classrooms. The concepts of multi-media and innovation allowed students to be challenged and stay involved with technology. The videodisc questionnaire is attached. (EJV)

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Adult Basic Education Program
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Phoenix, Arizona 85003

FINAL REPORT

for

VIDEODISC EDUCATION IN ADULT BASIC EDUCATION

A 310 Special Demonstration Project

1986-1987

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ACKNOWLEDGEMENTS

Special thanks and consideration to the students at the Maricopa Skill Center for their participation in this project. Their observations, negative or positive, reminded us that technology is only beneficial to a program when there is student participation.

Three instructors at the Maricopa Skill Center Learning Center spent valuable time training, researching, preparing, reviewing and encouraging student participation. Their dedication to students and innovative strategies for learning provide outstanding leadership at the Learning Center.

Frank Gamboa
Audio-Visual

Emma Jackson
ABE/GED Instructor

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VIDEODISC EDUCATION IN ADULT BASIC EDUCATION

In Adult Basic Education classes throughout Arizona, instructors are faced with providing the disadvantaged/undereducated student with alternatives to a traditional education. Many of the programs serve a rural population producing small numbers of students, yet this population deserves an opportunity to make use of technological advances in education.

The funds spent need to encompass longevity of product, ease of storage and teacher/student participation. Rio Salado Community College Adult Basic Education (RSCC/ABE Program) piloted such a program produced by Systems Impact, Inc. The program is called "Core Concepts in Mathematics" and "Understanding Chemistry and Energy." The programs are a series of minicourses incorporating sound instructional design and video technology.

Videodisc programs are designed to accommodate students who need extensive review as well as repetition of one particular segment. Additionally, students and teachers are not locked into a specific time frame; when viewing a program, they can pause as long as necessary without damaging the recordings.

IMPLEMENTATION

OBJECTIVE #1: To use the Core Concept videodisc programming in an ABE/GED classroom as a pilot program for students.

-The programming includes a videodisc player with a hand-held remote control keypad and a color TV or monitor. The Maricopa Skill Center was selected because of its diverse population. The students were from vocational rehabilitation and the public-at-large had basic skills needs, in addition to students from the Marciopa Skill Center training programs (such as welding, nursing, cashier sales, meat cutters, and hotel/motel workers). The students come to the program with a variety of skill levels and this project provided academic support for them as they mastered their vocational training.

-Two of the programs, Mastering Fractions and Mastering Ratios, were not particularly successful. Mastering Fractions used shaded and unshaded circles to show the meaning of fractions; explanations about the circles were confusing and the excessive use of these particular graphics had the effect of "talking down" to adult learners. Mastering Ratios suggested a "lengthy procedure for solving problems" (most textbooks arrive at the same answer in half as many steps). Even Mastering Decimals and Percents includes a rarely used method for rounding decimals. It is suggested that future editions be modified and refined.

-Understanding Chemistry and Energy was well received by students and instructors. These videodiscs supplied the students with an organized introduction to the principles of Chemistry. This program was helpful to GED students, those entering nursing, and to others requiring a general background. The quality of production was superb.

-Students on various levels have participated in the videodisc instruction Mastering Decimals and Percents. When questioned about needing fewer or more examples, their typical responses were "more," "just right," and "fewer" -- yet they all agreed that the experience was "fun," "very helpful," and "enjoyable." Thus, all levels seemed to gain. Therefore, one strength of the decimal/percent program was its usefulness on many instructional levels.

OBJECTIVE #2: To examine, review and purchase the videodiscs, videodisc player and products, instructor's manuals, and student response booklets for use in an ABE classroom.

-Videodisc hardware is impressive because of its versatility, technical capabilities, and durability. Student-teacher and student-student interaction are encouraged when the videodisc presentation of a difficult concept can be "halted," discussed, expanded upon, and then continued. Since volume is adjustable and the equipment movable, the videodisc can be used within a learning center by either an individual or a small group without distracting others. The hardware is easily learned and used by all.

The following positive/negative columnar format will provide readers of this report with information about the usability of the videodisc recordings and the manuals.

VIDEODISC RECORDINGS

POSITIVE

- Good graphics
- Easy to use
- Provides variety
- Non-threatening
- Coordinated photography, animated graphics, flow charts, and well-chosen captions

NEGATIVE

- Lack of directions about when to go from screen to book
- The screen "menu" does not provide chapter content information

MANUALS

POSITIVE

- Simple to complex format
- Good summary charts
- Well organized
- Good listing of frame/concept location
- Appropriate to level

NEGATIVE

- Lack of directions about when to go from book to screen
- Math manual is wordy

In general, the Chemistry program was easier than the Mathematics program to use (by instructor and student); and overall while inadequate by some structured standards, the presentations in manual and recordings were appropriate to the adult basic education setting.

OBJECTIVE #3: To train instructor(s) in integrating videodisc concepts into existing curriculum.

-Using the course scope and sequence, the instructors spent several weeks, individually and with students, previewing and learning the technology. By interacting, monitoring, and directing focus with the videodisc, the teachers were able to increase students' ability to pay attention to detail and to follow directions.

OBJECTIVE #4: To develop an evaluation tool to assess the usage of videodisc programming in an ABE/GED classroom.

-Students were asked to use a sign-in sheet providing date, name, in/out times, subject and disc number. Additionally, a questionnaire was developed for student comments (Attachment 1).

EVALUATION

Systems Impact, Inc. did not follow the production schedule outlined in the brochures, so the total science program has not been reviewed by students. The student evaluations will continue throughout the summer and will be available upon request.

In summation, videodisc hardware is indeed a viable option to ABE classrooms and more companies are now producing recordings. This indicates that the quality and price will become more responsive to the limited funding for Adult Basic Education programs. The concepts of multi-media and innovation allow students to be challenged and stay involved with technology.

The transfer of skills involving the use of technology from home to school to workplace is a growing trend. What began with the telephone and continued through audio cassettes, slide projectors, personal computers, VCRs, and compact discs is now entering a new phase--videodisc.

ATTACHMENTS

1. Evaluation for Videodisc

VIDEODISC

1. Are the directions for using the videodisc clear? Yes _____ No _____

2. After initial instruction, is the equipment easy to operate? Yes _____ No _____

3. In what ways are the printed materials helpful? _____

_____

_____

4. Is there (enough/too much/too little) repetition in the lessons?

_____

5. Should any sections of the program you have studied include (more/fewer) examples?

Program: _____ Comments: _____

_____

6. What are the advantages of using the videodisc? _____

_____

_____

Any disadvantages? _____

_____

7. Would you prefer to use the videodisc independently or with a small group?

_____

_____

8. Other comments? _____

_____

_____

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE.

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